QUEENSLAND MOLLUSCAN NOTES, No. 2.

By Tom Iredale.*

(Plate IX.)

Continuing these notes,† new species are described and rectifications of identity are recorded. These are determined mainly from the collections made by Mr. Melbourne Ward and Mr. William Boardman, of the Australian Museum, who have dredged successfully in Port Curtis, and off North-west Island, Capricorn Group. Successful shore collecting was also done by them on the mainland and islets, and this has proved of service for comparison, showing clearly the distinction between the fauna of the mainland and that of the coral reef.

The accompanying illustrations were prepared by Miss J. K. Allan, of the Australian Museum, to whom my best thanks are here tendered.

Melaxinæa labyrintha gen. & sp. nov.

(Plate IX, figs. 1–4.)

Under this name is described the shell which in recent years has been called *Glycymeris vitreus* Lamarck. Beautiful living specimens were dredged by Mr. Melbourne Ward in Albany Passage, 9–12 fathoms, and upon checking Lamarck's reference many discrepancies were noted. Firstly, it was described from "Mers australes" collected by Péron, and this shell is only taken by the dredge in Queensland waters where Péron did not collect. This created suspicion, and the description called for a thin brittle shell, which this species is not, and then it was found that Reeve had figured the unique valve. Reeve's figures definitely showed a differently shaped shell with a more complex sculpture, the ears especially differing.

Shell semi-orbicular, very compressed, thin but solid, a little oblique. Colouration dirty cream or fawn marked with brown spots irregularly. The straight ligamental edge shows a narrow compressed ligamental area above which the umbones almost meet. The sculpture in the adult shows close radial lines of nodules on a groundwork of concentric crinkled threads. The minute juvenile here figured shows that the sculpture begins as about twenty defined nodulose ribs, the interstices minutely concentrically threaded. With age these ribs split, the nodules being less continuous, and in the adult fifty or more ribs can be

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seen, some still showing their duplicate nature. The hinge is composed of two straight rows of teeth, meeting angulately in the juvenile, separated by the ligamental area intruding in the adult. The inside colouration is white in the juvenile but mostly marked with brown in the adult. The crenulation of the edge is deep and regular when young but less marked though still definite in the adult.

Length 37 mm.; height 38 mm.; diameter 12 mm.

Habitat: North Queensland (only dredged). Type from Albany Passage, 9–12 fathoms. Also collected at Michaelmas Cay, 9–12 fathoms.

Probably Lamarck's *vitreus* came from West Australia, as Odhner (Kungl. Svensk. Vet. Akad. Handl., Bd. 52, No. 16, p. 22, pl. 1, ff. 12–13, 1917) has figured a young specimen from off Cape Jaubert, North-west Australia, which differs from ours in detail, and in shape fits Reeve's figure of Lamarck's type well.

Family TELLINIDÆ.

A curious Tellinid was included in a fine collection brought back by Mr. Melbourne Ward from the islands in the Whitsunday Passage. It proved to be identical with a shell from New Caledonia identified in London as *Tellinungula bruguièri* Hanley. *Tellina bruguièri* was described from the island of Panhay, Philippines, and the Australian specimen differs from the description and figure in the shorter posterior side and the more produced anterior edge, the concentric sculpture more pronounced and the radial nearly obsolete; the teeth are even larger and the pallial sinus of greater extent. These features can be distinguished with the subspecific name *refecta* nov. Regarded as referable to the genus *Macoma* on account of its lack of lateral teeth, it was separated by H. Adams (Proc. Zool. Soc. 1860, p. 369) with the name *Macalia*, introduced for it alone. Twelve years later Römer, monographing the Tellinidæ in the Conch. Cab. ed. Kuster, Bd. x, Abth. 4, p. 268, 1872, and ignorant of H. Adams's action, again recognised its distinction, giving the name *Tellinungula* to the section for the single species. Bertin in his monograph of the Tellinidæ left it in *Macoma*, with which genus it has probably no close affinity; and Dall, without comment, in the Trans. Wagner Free Inst. Science, vol. iii, p. 1044, 1900, allowed it as of sectional value under the subgenus *Macoma*, probably from no close attention to the shell, as it is of striking appearance, recalling *Tellina inflata* Gmelin and *Tellina spectabilis* Hanley. The latter has been classed under *Metis*, which name, long known to be preoccupied, has, at the second attempt, been emended to *Apolymetis* by Salisbury (Proc. Malac. Soc. (Lond.) vol. xviii, p. 258, Nov. 1929). Hanley's *spectabilis* does not appear to me to be congeneric with *meyeri*, the type of *Apolymetis*, and is therefore here differentiated with the new generic name *Leporimetis*. Hanley's *Tellina spectabilis* and *bruguièri* were both described in the Proc. Zool. Soc. (Lond.) 1844, pp. 141–2, Dec., from the Philippine Islands.

Prophetilora arizela gen. & sp. nov.

(Plate IX, figs. 10, 11.)

A toothless "Lucinid" with delicate concentric sculpture and somewhat indistinct radials, which can be easily visualised as being like a large embodiment of the shell described as *Lucina ramsayi* by Smith (Rep. Chall. Zool., vol. xiii, 1885, p. 174), for which I have recently introduced (Rec. Austr. Mus., vol. xvii, 1930, p. 390) the genus name *Monitilora*. In the present case the cardinal is missing, the lunule still more impressed, and the interior inside the pallial line chalky and pustulose.

Shell semi-circular, subglobose, subequilateral, equivalve, umbones small, attingent. Colour white, somewhat glassy, translucent, thin but strong. Lunule small but deeply impressed, anterior side somewhat pointed, posterior side subangulate. The sculpture consists of fine concentric well-marked liræ obscurely striate with fine radials which form a subcrenulation only discernible with a glass. An indistinct radial groove marks off the posterior wing. Interior chalky inside the pallial line, vitreous outside. Hinge edentulous. Muscle scars normally lucinid, rather narrow and elongate.

Length 38 mm.; height 34·5 mm.; depth of single valve 10 mm.

Habitat: North Queensland. Type from Friday Island, Torres Strait. Also collected at Michaelmas Cay.

Fallartemis amina gen. & sp. nov.

(Plate IX, figs. 14, 15.)

Mr. Melbourne Ward brought back a large quantity of shells and shell-sand from the beach at Friday Island, Torres Strait, and many Dosinids were present. Two very distinct forms are here named; the commonest species in the collection being *Dosinia deshayesii* which was well figured by Smith (Rep. Chall. Zool., vol. xiii, 1885, pl. i, fig. 1). The present genus is based on a comparatively smooth shell of the *sculpta* Hanley series which is here named *Fallartemis amina*, and is named as type of the genus, there being a number of species related to *sculpta*.

Shell small, subcircular, thin but strong, broader than high, fairly compressed, lunule small, rather shallow, escutcheon obsolete. Colour white, with faint radial underlying translucent streaks, more noticeable medially. The sculpture consists of fine lamellæ set very closely, and comparatively smooth medially; they develop on each edge into fine frilled puckers more pronounced. At each side radials also appear, these being most marked on the anterior side, and missing on the medial portion that appears smooth and rather shining. Hinge line shallow, more spread than in *Pardosinia*, the adductor muscle scars rather small and narrow. Pallial sinus of median length, reaching about half-way across both as to height and breadth.

Height 29 mm.; length 32 mm.; depth of single valve 8 mm.

Habitat : North Queensland. Type from Friday Island, Torres Strait.

There is a species described by Deshayes as *Dosinia semiobliterata* (Cat. Conch. Coll. Brit. Mus., pt. i, p. 6, 1853) from Australia, collected by Strange, which has apparently not been figured nor localised. The description reads something like this species but it is more probably *sculpta* Hanley.

Semelartemis ætha gen. & sp. nov.

(Plate IX, fig. 18.)

A curious Dosinid recalling *Semele* in appearance and of different shape from most of the family, the texture also distinctive.

Shell somewhat elongately subcircular, inequilateral, thin, rather fragile, somewhat compressed, lunule small, impressed, escutcheon notable, a little winged. Colour white. The sculpture consists of rather prominent closely set lamellar ridges, finer umbonad, and little frilled at the edges. There is no radial striation present. The extraordinary prolongation of the posterior side differentiates this from all other Australian Dosinid groups. Hinge very broad shallow, adductor muscle scars small. Pallial sinus long and rather narrow, reaching more than halfway across the interior. The escutcheon is very much lengthened and winged recalling that of *D. alata* in the immature, but less noticeable in the adult.

Height 46 mm. ; length 52·5 mm. ; depth of single valve 12 mm.

Habitat : North Queensland. Type from Friday Island, Torres Strait.

Coralastele allanæ gen. & sp. nov.

(Plate IX, fig. 5.)

A beautiful Trochoid of no close relationship to any other Australian species. Shell thin, delicate, truly conical, pseudo-umbilicate, columella arcuate, not plaited, outer lip thin. Colour rosy or brownish pink with regular brownish red markings on the ridges and intervals. Whorls eight, excluding a somewhat tilted one-whorled protoconch. The last whorl seven-eighths of the bulk of the shell, semi-shouldered, the gently rounded periphery showing three equidistant elevated thin ridges, sometimes with a faint thread between ; the shoulder also bears a similar ridge ; the base is rounded, similarly cingulate with eight ridges, a few threads sometimes between. The preceding whorl is similarly ornamented, two main cinguli present, the antepenultimate showing only one with radial threads overriding which are obsolete or absent on the later whorls. The earliest whorls show more prominently the radial sculpture as radiating ribs. The mouth is circular, the outer lip thin, columella well arched ending abruptly in a projecting tip and meeting the body whorl with a sweep, a thin glaze joining the outer lip. The pseudo-umbilicus is narrow and deep.

Height 14 mm. ; breadth 13 mm.

Habitat: Queensland. The type is from North-west Island, Capricorn Group.

Hedley collected this species alive at Murray Island in crevices of coral blocks, and the operculum is thin, horny, multispiral. Specimens were compared in the British Museum (Natural History) and were pronounced novel. This beautiful species is named for Miss J. K. Allan, who has furnished so many excellent paintings of Australian molluscs to accompany papers by Hedley and myself.

Family CERITHIIDÆ.

As noted in my last paper I had not solved the problems surrounding the generic names to be used in this family, and here offer some notes with regard to the names under consideration. The acceptance of the names given by Martyn in the Universal Conchologist has been a source of much trouble, and Winckworth's conclusion, that, as Martyn was not using a binomial nomenclature in the explanation to the plates, Martyn's names be rejected, is herewith confirmed. The beautiful figures provided by Martyn have never been excelled, but his proposed system of nominating them was never published, and the recognition of Martyn's temporary names has caused much confusion without creating any benefit. The name *Clava* used by Martyn in 1784 is therefore ignored, and we can pass on to *Cerithium* introduced by Bruguière in 1792, when a whole series of species was named but no type indicated, and from this point we must determine the usage of this name. Lamarck in 1799 cited *Murex aluco* L. only, but in 1801 named *Cerithium nodulosum* Bruguière as examples. The first type designation was made by Montfort in 1810 when *vertagus* L. was selected. Gray in 1847 included "*Cerithium* Adans. Brug.," with type "*Murex radula*," but since then *Cerithium* has been used with *nodulosum* as example, a solution quite inacceptable. *Clava* was correctly introduced by Humphrey in the Museum Calonnianum in 1797, but Gmelin had used the name in a different sense in 1791, so *Clava* can be absolutely dismissed from this problem. *Cerithium* then seems only valid for the *vertagus* series, which have been commonly called *Vertagus* following Schumacher in 1817, but this usage was bad as Link in 1807 had pre-empted *Vertagus* for different shells. At the same time Link introduced *Aluco* for some cerithioid shells of which *Cerithium adansonii* was the first species, and is here named as type. The West African forms are not congeneric with the Pacific shells, so that *Aluco* does not come into use in Australian nomenclature.

In 1899 Hedley described a new generic form *Contumax*, which later proved to be the very juvenile shell of *nodulosum*, a huge, massive, coral reef shell of very different appearance when adult. Yet Hedley's name appears to be the only one available for the group about *nodulosum*, while *Pseudovertagus* Vignal proposed for *aluco* can be used independently. The change from the juvenile to adult shown in *nodulosum* is somewhat paralleled in *aluco*, as described below in connection with the new species *Pseudovertagus excelsior*. The details regarding *Clava* can be studied in Dall. (Trans. Wagner Free Inst.

Sci., vol. iii, p. 290, 1892), Pilsbry (Proc. Acad. Nat. Sci. Philad., 1901, p. 392), Cossmann (Essai Paleoconch. comp. livr. 7, pp. 66–84, 1906), Dall. (Proc. Acad. Nat. Sci. Philad., vol. 59, p. 363, 1907), and Winckworth (Proc. Mal. Soc. (Lond.), vol. xviii, p. 228, 1929). These results may be written thus :—

Cerithium Bruguière .. Type by Montfort, 1810 : *Cerithium vertagus* Linné.

Aluco Link .. .. Type here named *Cerithium adansonii* Bruguière. Not Australian.

Contumax Hedley .. .. Type, *C. decollata* = *C. nodulosum* Bruguière.

Pseudovertagus Vignal .. Type, *Murex aluco* Linné.

Many further subdivisions will be discussed later.

Pseudovertagus excelsior sp. nov.

(Plate IX, fig. 17.)

An elegant Cerithioid nearest *C. sowerbyi* Kiener, which I have renamed *C. phylarchus*, but more subulate.

Shell awl-shaped, tapering rapidly, earlier whorls clathrately sculptured, later whorls smooth, columella not plaited, canal very much recurved. Colour greenish white marked with more or less regular squarish purple-brown spots, the ground colour appearing as spiral lines, the darker as irregular radial marks. The last whorl shows a semi-absorbed varix at the third, but no previous varices are to be seen ; basally fine grooving, to the number of four, surrounds the whorl but these can scarcely be seen on the penultimate, and on the penultimate the intervening spaces appear more as elevated scarcely nodulous ridges. Normally the adult is truncate, about twelve adult whorls being counted ; the earliest of these shows a very distinct radial ribbing of about ten to twelve ribs overrun with close threads very different from the later whorls. The suture is linear but threadlike and distinct. The mouth is obliquely oval, the outer lip circular, heavy, thickened, subvaricose, the columella not plaited, inner lip as a heavy glaze extending across the body whorl to the outer lip where just inside there is a prominent notch and entering ridge. The canal is long but bent back at right angles and narrow, no umbilical chink being present.

Length 74 mm. ; breadth 21 mm.

Habitat : North Queensland. Type dredged in 11 fathoms, Michaelmas Cay.

A correction may be here added as in my last notes I proposed *Cerithium probleema* for *Cerithium lemniscatum* Quoy & Gaimard, and I find that Cossmann (Essais Palæoconch. comp. livr. 7, July 1906, p. 123, footnote) had made the alteration, providing *Cerithium philippinense*, a correction not recorded in the Zoological Record.

Family CONIDÆ.

Many species of Cones have been recognised from Queensland. Hedley admitted forty-three species, a number so inadequate that Shirley immediately suggested the addition of twenty-one more, but as he included extralimital shells of illegitimate origin none of his additions can be incorporated without confirmation. I recorded eleven legitimate accessions and there are still more. As with Cowries, Cones have long been a souree of delight to amateur shell-collectors, their form and beauty deservedly being admired. Nearly a thousand species have been named, and it is now very difficult to determine the identity of a species among so many, as subdivision has not been systematically carried out. An attempt is here made to fix the major groups as a preliminary to more accurate nomination.

The type of the genus *Conus* has been commonly regarded as *marmoreus* Linn., but the earliest type designation appears to have been made by Swainson when he named *C. litteratus* Linn. as the type (Treat. Malac. 1840, p. 148). Previously Montfort (Conch. Syst., vol. ii, 1810, p. 407) had named *C. fulgurans* = *C. generalis* Linné as type, but that species does not occur in the tenth edition of Linné's Systema Naturæ and hence is inadmissible. In the same place Montfort carried out an excellent splitting up of the Linnean genus, introducing *Cylinder*, *Rollus*, *Hermes*, and *Rhombus* for easily recognisable groups. Swainson renamed the same groups and added some more, and then Mörch (Cat. Conch. Yoldi., 1852) proposed a few more. Little attention has since been paid to this group, so that while the major groups, which may be subfamilies or even families, are named, the majority of the species have been systematically neglected.

The group known as the Textile Cones was separated by Montfort under the name *Cylinder*; there is, however, a prior *Cylindra* as noted in my previous paper in these Memoirs, so that recourse would be to Swainson's *Textilia*, but Swainson indicated *bullata* as the type, and this is not a normal textile species. As there seems to be more than one genus in this series I propose *Darioconus*, naming *omaria* Brug. as type and *Regiconus* with *auratus* Bruguière as type. In the same manner *Hermes* and *Theliconus* were proposed for the *nussatella* series, and *glans* Bruguière has been there included, but it deserves generic rank and I introduce the name *Leporiconus* with *glans* as type and here associate *coccineus* Gmelin.

When Swainson introduced his genus *Dendroconus* he nominated *striatus* as type, and as this distinct form requires a distinct designation there is this name available though hitherto it has been used for the *betulinus* series. For this latter I propose *Cleobula*, naming *figulinus* as type.

This brings us to the Cone we are most concerned with here, viz., a form of the *ammiralis* type. Whitley and I secured a small specimen at Michaelmas Cay which was referable here, but did not exactly agree, so was left unnamed. Messrs. Ward & Boardman secured a magnificent specimen of the same species

at North-west Isle, Capricorn Group, and it is here differentiated as *Leptoconus ammiralis temnes* subsp. nov. It is a more elegant form than the typical shell, with the spire longer and more concave. It is nearest Reeve's fig. 11c, but the markings are more pronounced, bold white blotches being present with dark-brown linear stripes, the median band bearing two interrupted lines of brown on a cream ocellated ground. *Coronaxis* was introduced by Swainson with *marmoreus* Linn. as type, but the name has been used for the *ebræus* series, which is here named *Virroconus*, *ebræus* being selected as type. For the *arenatus* series Swainson's *Puncticulis* is available, while Mörch's names *Rhizoconus*, *Pionoconus*, and *Phasmoconus* can be utilised for the groups typified by *miles* Linné, *magus* Linné, and *radiatus* Gmelin respectively. Many more names will be proposed before any comparative system will be brought into this family, such series as the *anemone* one of Southern Australia standing apart. For *anemone* Lamarck as type, I here propose the genus *Floraconus*, and also note that there is still confusion in connection with this species which I am attending to in another place.

Cancellaphera amasia gen. & sp. nov.

(Plate IX. fig. 8.)

Shell small, subglobose, solid, spire short, shoulder of whorls tabulate, mouth somewhat triangular, umbilicus small and deep, plaits three. Colour purplish brown with the nodules paler reddish. Whorls four with a smooth glassy protoconch of two whorls, somewhat globose. Adult whorls with deep channelled shoulder, the sculpture of longitudinal ribs crossed by strong spiral threads, the ribs being twenty in number, the threads about ten on the last whorl. The umbilicus is small, bounded by a curved rib. Columella straight with three plaits situated rather deeply, forming an anterior subcanal; posteriorly, the inner lip crossing as a thin glaze meets the outer lip, the aperture being triangular in shape but not free. Outer lip thick but not varicose, eleven long entering ridges being counted inside.

Height 15 mm.; depth 10 mm.

Habitat: Queensland. Type dredged in 9–11 fathoms, Port Curtis.

May be *Cancellaria obliquata* Lamarck of Hedley's list.

Family CYPRÆIDÆ.

In my last notes I added several species but was unable to rectify the generic nomination. I have, however, to add a new species, a very unexpected event, so have endeavoured to utilise Schilder's recent Revision (Arch. für Naturg. (Wiegmann) Year 91, 1925, abt. A, heft 10, issued in 1927), and bring our species into line with recent research. Schilder's essays mark a most pronounced advance, and again completely illustrate the development of the splitter whenever intensive study is undertaken. Beginning with few genera, Schilder has now recognised eighty-four subgenera which he used in a generic sense, and, realising that this result would cause a sensation, lumped several

species equally as worthy of separation. Consequently in this note I propose several new genera to remove obvious anomalies and further assist in the correct interpretation of the difficult members of this group. I am preparing a complete account of the Mollusca collected by the British Great Barrier Reef Expedition and will go more fully into the details in that place.

Simply following Schilder's groupings, the Queensland species names will read as under; Hedley's List being followed in the first column :—

Cyprœa annulus Linné, 1758 ..	.. *Monetaria annulus* Linné, 1758
arabica Linné, 1758 ..	.. *Arabica arabica* Linné, 1758
argus Linné, 1758 ..	.. *Arestorides argus* Linné, 1758
asellus Linné, 1758 ..	.. *Evenaria asellus* Linné, 1758
caputserpentis Linné, 1758	.. *Ravitrona caputserpentis* Linné, 1758
carneola Linné, 1758 ..	.. *Lyncina carneola* Linné, 1758
caurica Linné, 1758 ..	.. *Erronea caurica* Linné, 1758
clandestina Linné, 1767 ..	.. *Palmadusta clandestina* Linné, 1767
cylindrica Born, 1778 ..	.. *Palangerosa cylindrica* Born, 1778
eburnea Barnes, 1824 ..	.. *Erosaria eburnea* Barnes, 1824
erosa Linné, 1758 ..	.. *Erosaria erosa* Linné, 1758
errones Linné, 1758 ..	.. *Erronea errones* Linné, 1758
felina Gmelin, 1791 ..	.. *Erronea listeri* Gray, 1824
fimbriata Gmelin. 1791 ..	.. *Erronea fimbriata* Gmelin, 1791
flaveola Linné, 1758 ..	.. *Erosaria flaveola* Linné, 1758
helvola Linné, 1758 ..	.. *Ravitrona helvola* Linné, 1758
hirundo Linné, 1758 ..	.. *Evenaria hirundo* Linné, 1758
isabella Linné, 1758 ..	.. *Basilitrona isabella* Linné, 1758
limacina Lam., 1810 ..	.. *Staphylœa limacina* Lam., 1810
lutea Gronov., 1781 ..	.. *Palmadusta humphreysii* Gray, 1825
lynx Linné, 1758 ..	.. *Lyncina vanelli* Linné, 1758
mauritiana Linné, 1758 ..	.. *Mauritia mauritiana* Linné, 1758
miliaris Gmelin, 1791 ..	.. *Erosaria miliaris* Gmelin, 1791
moneta Linné, 1758 ..	.. *Monetaria moneta* Linné, 1758
notata Gill, 1858 ..	.. *Erronea notata* Gill, 1858
punctata Linné, 1767 ..	.. *Evenaria punctata* Linné, 1767
quadrimaculata Gray, 1824	.. *Palangerosa quadrimaculata* Gray, 1824
saulæ Gaskoin, 1843 ..	.. *Palmadusta saulæ* Gaskoin, 1843
sophiæ Brazier, 1875 ..	.. *Erronea chrysostoma* Brazier, 1880
subviridis Reeve, 1845 ..	.. *Palmadusta subviridis* Reeve, 1845
tigris Linné, 1758 ..	.. *Cyprœa tigris* Linné, 1758
valentia Perry, 1811 ..	.. *Leporicyprœa valentia* Perry, 1811
vitellus Linné, 1758 ..	.. *Lyncina vitellus* Linné, 1758
walkeri Gray, 1832 ..	.. *Palmadusta walkeri* Gray, 1832
xanthodon Gray, 1832 ..	.. *Palmadusta xanthodon* Gray, 1832
ziczac Linné, 1758 ..	.. *Palmadusta ziczac* Linné, 1758

To which I have added—

Cypræa becki Gaskoin, 1836 ..	.. *Paulonaria becki* Gaskoin, 1836
cicercula Linné, 1758 ..	.. *Pustularia cicercula* Linné, 1758
cribraria Linné, 1758 ..	.. *Cribraria cribraria* Linné, 1758
contaminata Sowerby, 1832	.. *Evenaria contaminata* Sowerby, 1832
gaskoini Reeve, 1846 ..	.. *Cribraria gaskoini* Reeve, 1846
globulus Linné, 1758 ..	.. *Pustularia globulus* Linné, 1758
irrorata Gray, 1828 ..	.. *Naria irrorata* Gray, 1828
mappa Linné, 1758 ..	.. *Leporicypræa mappa* Linné, 1758
microdon Gray, 1828 ..	.. *Erronea microdon* Gray, 1828
nucleus Linné, 1758 ..	.. *Nuclearia nucleus* Linné, 1758
subcylindrica Sowerby, 1870	.. *Palangerosa subcylindrica* Sowerby, 1870
talpa Linné, 1758 ..	.. *Talparia talpa* Linné, 1758
pyriformis Gray, 1824 ..	.. *Palmadusta pyriformis* Gray, 1824.

Cypræa angustata Gmelin, 1791, a Tasmanian species, is rejected.

Many species were added by Shirley which are not acceptable until confirmation is forthcoming, and it may here be noted that Schilder records a number of species from "Sidney" which would have been better written "New South Wales."

The type of *Cypræa* must be *tigris* Linné, not *mappa* as used by Schilder, and the new names I have introduced are here itemised:—Thus *Arestorides* is proposed with *Cypræa argus* Linné as type, this species being included in his group *Callistocypræa* provided by Schilder for *C. aurantium* Martyn, and I cannot see much close relationship between these two. *Evenaria* is given to the group, of which I select *C. asellus* Linné as type, the other Australian species associated with it being *hirundo* Linné, *punctata* Linné, and *contaminata* Sowerby, though this group may be remodelled.

For the *caputserpentis* group I introduce *Ravitrona*, naming that species as type, and including *helvola* Linné. Schilder has correctly rejected *caputanguis* Philippi but proposed *caputophidii* for shells from Yokohama and Mauritius, and suggested the Australian shells regarded as *caputanguis* might belong to this species. All the so-called *caputanguis* I have yet examined appear to be merely variants of *caputserpentis*, and there is no need at present to recognise two species in Australian waters. If later two species can be separated, a new name will probably be required for the second one. A series of small shells is included by Schilder under the genus *Adusta*, which has *onyx* as type. Our shells do not correlate well with that extralimital form, and I propose *Palmadusta*, naming *clandestina* L. as type. To this genus I attach the so-called *lutea* Gronov. and *ziczac* Linné, while the series *xanthodon* Sow., *pyriformis* Gray, *walkeri* Gray will constitute a subgenus *Gratiadusta* with *pyriformis* Gray as type, and *subviridis* Reeve may be tentatively here included. The *cylindrica* group is here named *Palangerosa*, that species being named as type, the three representatives being *cylindrica* Born, *subcylindrica* Sow., and *quadrimaculata* Gray. The genus *Stolida*, to which Schilder referred them, was nameless as the

name had been used many years before Jousseaume selected it, a fact Schilder has since recognised. The beautiful shell *isabella* Linn. was placed by Schilder under *Jousseaumea* Sacco, introduced for a European fossil group of no real relationship, and I separate it under the name *Basilitrona*, naming *isabella* as type. The typical *Cypræa*, as mentioned above, must be *tigris* Lam., so for the *mappa* group, wrongly so considered by Schilder, I introduce the new genus *Leporicypræa*, *mappa* being named as type, the very rare *valentia* being included but only tentatively. The very small "Cypræas" will need much more study before they can be regarded as being well distributed. The curious little *irrorata* Gray, allowed as monotypic of *Naria*, is not unlike the *beckii* series, from which it is widely separated by Schilder. I introduce *Paulonaria* with *beckii* Gaskoin as type and will work these out better later. *Trivia* is also well subdivided by Schilder, and the following comparison of Hedley's species will enable us to systematise these better :—

Trivia globosa Gray, 1832	*Cleotrivia pilula* Kiener, 1845
grando Gaskoin, 1848	*Trivirostra edgari* Shaw, 1909
pellucida Gaskoin, 1846 ..	*Dolichupis pellucidula* Gaskoin, 1846
producta Gaskoin, 1835	*Dolichupis producta* Gaskoin, 1835
scabriuscula Gray, 1828	*Trivirostra scabriuscula* Gray, 1828
staphylæa Linné, 1758	*Staphylæa staphylæa* Linné, 1758
sulcata Gaskoin, 1848	*Trivirostra sulcata* Gaskoin, 1848
vitrea Gaskoin, 1848	*Trivirostra vitrea* Gaskoin, 1848.

The small globular "Trivias," of which there is more than one species confused, are here separated with the new generic name *Cleotrivia*, *pilula* Kiener being named as type, *globosa* being the American species. The forms with produced extremities, following Schilder, are separated, and the new genus name *Dolichupis* proposed, *producta* Gaskoin being selected as type.

The Linnean species *staphylæa* was classed by Hedley under *Trivia*, but it is a Cypræoid form, and it is suggested here that *limacina* Lamarck is probably more closely allied to *erosa* than to *staphylæa*. Again, *carneola* is given as type of *Lyncina* by Schilder, but the apparent type was *lynx*, and this was fixed by Tryon (Struct. Syst. Conch., vol. ii, p. 198, 1883), so that I introduce the new subgeneric name *Mystaponda* with *vitellus* Linné as type. I have accepted a few emended specific names in the foregoing list, but probably many more will need consideration such as *flaveola* Linné, for which Hedley has noted in MS. *labiolineata* Sowerby as being probably the alternative name, and Schilder has used *helenæ* Roberts, 1868. Hedley also added *cumingii* to the Queensland list, and this species is referable to *Cribraria*. As to Hedley's *felina* this name has been replaced by Schilder by *listeri* Gray, and a new subgeneric name is here proposed for this form, *Melicerona*, of which a curious development occurs at North-west Island, having rostrate extremities and somewhat excavate under surface recalling the New Caledonian aberrations, which hitherto appear to have been restricted to that island.

An addition to the Queensland list is *Cypræa rhinoceros* Souverbie (Journ. de Conch., vol. xiii, p. 156, 1865), described from New Caledonia, which was also

collected at North-west Island. Schilder correctly points out that this is distinct from *interrupta* Gray, but falls into a curious error in citing as a synonym *coxeni* Cox, a species quite unlike. While Schilder ranges *rhinoceros* with *asellus* it is somewhat aberrant and had better be separated as *Blasicrura*, and as to *coxeni* its relationships seem to be more with *errones*, but again it would be best to provide it with a new subgeneric name, *Eclogavena*, also. By this means, errors such as the above will be obviated.

Another case of an extralimital species may be noted. Schilder includes the beautiful *guttata* Gray under the subgenus *Erosaria*, but it certainly deserves separation and I therefore introduce the new generic name *Perisserosa* for it alone. Schilder also cites the specific name from Gmelin, but, as Gmelin's first two references certainly do not refer to this species, it will be more correct to propose a new name, *Perisserosa brocktoni*, for the specimen figured by Sowerby (Thes. Conch., vol. iv, pl. xvii, ff. 104–105, 1880) under the name *Cypræa guttata* Gray. This specimen should be in the collection of my friend Mr. J. R. le Brockton Tomlin, for whom it is named.

Nivigena melwardi gen. & sp. nov.

(Plate IX, figs. 12, 13.)

Shell small, pyriform, spire depressed, shining bluish white, mouth fairly narrow. The extremities are a little produced, anteriorly a little pinched, the spire appearing semi-umbilicate, the edges thickened. The back is fairly convex with obsolete spiral ridges present ; the outer edge is thickened and recurved with faint suggestions of crinkling as in *Erosaria* ; the contraction of the anterior end recalls that of *Stolida*, the semiumbilicate spire similar to that of *Stolida* ; the mouth is narrow, the teeth fairly large, on the outer lip sixteen deep clear teeth being counted while on the inner lip fifteen are present which are continued inwards on to the columella and visible from the outside.

Length 24 mm. ; breadth 16 mm. ; height 12 mm.

Habitat : Queensland. Type from North-west Island, Capricorn Group.

This beautiful species is not an albinism of any known Queensland species, differing in shape from *C. stolida* Linné which otherwise it resembles most, the mouth easily separating it from that species.

Family OVULID.E.

For this family Schilder uses the name Amphiperatidæ, probably correctly, based on the generic name *Amphiperas* of Gronow as used by Meuschen in a binomial sense. The name *Amphiperas* will then replace *Ovula* for the two species listed by Hedley in the Queensland list under the names *ovum* Linné and *tortilis* Martyn. The rejection of Martyn's names will necessitate reversion to Lamarck's *costellata* (Ann. Mus. Paris, vol xvi, 1810, p. 110) for the latter species. The other species included by Hedley were obviously not congeneric and I had separated them many years ago in manuscript, so I was delighted to find that Schilder had ruthlessly reorganised these species. I do not agree with his rejection of Bolten's *Volva* in favour of the later *Radius* of Montfort, and therefore use *Volva volva* for the

well-known Spindle Shell. The small species hitherto classed under *Ovula* and *Radius* have to be separated and grouped according to their facies and relationship. I had drawn up a scheme before I saw Schilder's classification, which is even more revolutionary than my own. Schilder separates the subfamily Amphiperatinæ into two tribes ("supergenera" would be a better name) and, under the European genus *Simnia*, proposes a subgenus, *Prosimnia*, with type *semperi* Weinkauff, a group of small elongate species including *dentata* Adams & Reeve from Australia. As Adams and Reeve's choice had been anticipated the new name *Prosimnia renovata* is proposed. Reeve's *Ovulum angasi* is placed by Schilder under *Radius*, but seems more closely allied to *Prosimnia* and may be there placed at present. This species was described from Port Curtis and has been collected there by most workers since. Messrs. Melbourne Ward and W. Boardman recently brought back a nice series taken from coral dredged in 9–12 fathoms, and these were immediately divided into two distinct species, the smaller one being the true *angasi*. The larger one is here described as *Phenacovolva nectarea* nov., and is common as dead shells on the beach at Caloundra, and is apparently the species recorded by Shirley under the name *Ovulum birostris* Lam., and included by Hedley in the New South Wales List under the name *philippinarum* Sow. Schilder uses *birostris* Linn. for the former species, though Hanley had indicated an error in the traditional usage, and Schumacher's *Radius brevirostris* (Essai nouv. Test, 1817, p. 259) may be the valid name for the *birostris* of authorities. It may be remarked that Schumacher's *Radius* appears to have been independently proposed.

The small Ovuloid shells Schilder classes under Thiele's genus *Primovula*, introduced for a South African species *beckeri* Sowerby, and introduces a subgenus *Pseudosimnia*, naming *carnea* Poir., a European fossil, as type. As there are two or three distinct groups confused in Australian waters I introduce the new generic names *Prionovolva* and *Diminovula* for the Australian shells known as *breve* Sowerby and *punctata* Duclos respectively. As Sowerby described his shell from unknown locality and he had East Australian shells, it may be that his species, which has been continually credited to Australia, really belongs here. Our shell shows an excellent generic feature in the curious saw-teeth in the middle of the outer lip; the strong cutting inside, the twisted posterior canal, the strong columella plait, and the callus towards the posterior canal on the body-whorl all distinguish this form from the *punctata* series with its strong sculpture; its globose form with less twisted posterior canal and obsolete plication indicate its alliance therewith, but this is negatived by the weak crenulation of the outer lip and lack of body callus: the Australian shell known as *punctata* has coarser striation and larger dots placed farther apart, and may be called *Diminovula verepunctata*.

Phenacovolva nectarea gen. & sp. nov.

(Plate IX, fig. 6.)

Belonging to the "*birostris*" series but of different proportions. Shell elongate, swollen medially, extremities prolonged, mouth linear. Colour pink, extremities brownish, a narrow white band round the middle. Sculpture consisting of fine striæ showing in the adult on the ends only but covering the immature.

The posterior canal is a little longer than the anterior and narrow ; the anterior canal is also a little broader ; the mouth is a little more open anteriorly though still narrow ; the inner lip seen as a very fine glaze only with no posterior nodulation, and only a very slight swelling anteriorly. The columella shows a faint plication internally. The outer lip is thickened and rolled back and shows no internal noduling.

Length 38 mm. ; breadth 9·5 mm.

Habitat : Queensland. Type dredged on corals in 9–12 fathoms, Port Curtis.

Prosimnia angasi Reeve is much smaller, stouter, extremities shorter, outer lip more thickened, and carries a notable swelling medially on the inner lip.

Colus boardmani sp. nov.

(Plate IX, fig. 7.)

Shell somewhat small for this group but regularly Fusoid in shape. Shell narrow, last whorl more than half length of shell, spire long, canal very long, mouth narrow, outer lip thin. Colour white, covered with a thin brownish crinkled periostraeum. Protoconch of one and a-half whorls, a little bulbous, tip planate, regular sculpture of deep rounded few longitudinal ribs overrun by spiral threads. These ribs become less pronounced as shell grows older, and only appear as a slight nodulation on the last whorl ; conversely the threads become more pronounced and are regular concentric liræ with strong intervening threads on the final whorl. Ten adult whorls may be counted. The mouth is a rather small oval, inner lip as a thin glaze, columella smooth, canal very long and straight, sometimes bent with age.

Length 78 mm. ; breadth 31 mm.

Habitat : Queensland. Type dredged in 9–11 fathoms, Port Curtis.

Pleuroploca altimasta sp. nov.

(Plate IX, fig. 9.)

Shell broadly fusiform, spire as long as aperture, body-whorl two-thirds the length of the shell, mouth oval, canal of medium length, open. Colour brownish yellow almost hidden with dark brown, mouth fleshy buff. Sculpture consisting of spiral threads, more or less obsolete on middle of body-whorl and developed as liræ on earlier whorls. Longitudinal noduling obsolete though faint indications are suggested on the juvenile whorls. Last whorl sub-shouldered, liræ more pronounced near the suture and basally round the canal. Mouth oval, outer lip thick but not varicose, inside closely lined wth fine entering ridges. Columella with three plicæ low down, the anterior one much larger than the other two ; inner lip as a thin glaze only, a short ridge present near posterior angle.

Length 96 mm. ; breadth 36 mm.

Habitat : Queensland. Type from Port Curtis.

This appears to be the coastal representative of the coral living *Pleuroploca filamentosa* Bolten.

Cirsotrema kelea sp. nov.

(Plate IX, fig. 16.)

Shell elegantly conical, strongly varicose, whorls well rounded, sutures deep, mouth free, umbilicus present but choked by early varix. Colouration white. Sculpture consists of very fine frilled longitudinal ridges, interstices threaded. Apical whorls missing, eight adult whorls remaining. On the last whorl, three varices are present, earlier whorls showing many, but intermediate ones lacking. The sculpture on the penultimate whorl shows about forty-five frilled laminæ, and as these are recurved it is difficult to count the encircling threads. The last whorl shows three strong varices, the middle area being twice either of the other, showing twenty-seven laminæ against thirteen. At one place the frills are broken off and the spiral threads appear as thin cords with three or four minor threads between, the whole series minutely crenulate. Mouth oval, free, the outer varix in the type being strongly duplicated, very thin and finely wrinkled and recurved. Operculum normal.

Length 24 mm.; breadth 13 mm.

Habitat: Queensland. Type dredged in 9–12 fathoms, Michaelmas Cay.

For quick reference the new names in this paper are here listed :—

Melaxinæa n. gen. with type *M. labyrintha* n. sp.
Melaxinæa labyrintha n. sp.
Macalia bruguièri refecta n. subsp.
Leporimetis n. gen. with type *Tellina spectabilis* Hanley.
Prophetilora n. gen. with type *P. arizela* n. sp.
Prophetilora arizela n. sp.
Fallartemis n. gen. with type *F. amina* n. sp.
Fallartemis amina n. sp.
Semelartemis n. gen. with type *S. ætha* n. sp.
Semelartemis ætha n. sp.
Coralastele n. gen. with type *C. allanæ* n. sp.
Coralastele allanæ n. sp.
Pseudovertagus excelsior n. sp.
Darioconus n. gen. with type *Conus omaria* Bruguière.
Regiconus n. gen with type *Conus auratus* Bruguière.
Leporiconus n. gen. with type *Conus glans* Bruguière.
Cleobula n. gen. with type *Conus figulinus* Linné.
Leptoconus ammiralis temnes n. subsp.
Virroconus n. gen. with type *Conus ebræus* Linné.
Floraconus n. gen. with type *Conus anemone* Lamarck.
Cancellaphera n. gen. with type *C. amasia* n. sp.
Cancellaphera amasia n. sp.
Arestorides n. gen. with type *Cypræa argus* Linné.
Evenaria n. gen. with type *Cypræa asellus* Linné.
Ravitrona n. gen. with type *Cypræa caputserpentis* Linné.

Palmadusta n. gen. with type *Cypræa clandestina* Linné.
Gratiadusta n. subgen. with type *Cypræa pyriformis* Gray.
Palangerosa n. gen. with type *Cypræa cylindrica* Born.
Basilitrona n. gen. with type *Cypræa isabella* Linné.
Leporicypræa n. gen. with type *Cypræa mappa* Linné.
Paulonaria n. gen. with type *Cypræa beckii* Gaskoin.
Cleotrivia n. gen. with type *Cypræa pilula* Kiener.
Dolichupis n. gen. with type *Cypræa producta* Gaskoin.
Mystaponda n. subgen. with type *Cypræa vitellus* Linné.
Melicerona n. subgen. with type *Cypræa listeri* Gray.
Blasicrura n. subgen. with type *Cypræa rhinoceros* Sowerbie.
Eclogavena n. subgen. with type *Cypræa coxeni* Cox.
Perisserosa n. gen. with type *P. brocktoni* n. sp.
Perisserosa brocktoni n. sp.
Nivigena n. gen. with type *N. melwardi* n. sp.
Nivigena melwardi n. sp.
Prosimnia renovata nov.
Phenacovolva n. gen. with type *P. nectarea* n. sp.
Phenacovolva nectarea n. sp.
Prionovolva n. gen. with type *Ovulum breve* Sowerby.
Diminovula n. gen. with *D. verepunctata* n. sp.
Diminovula verepunctata n. sp.
Colus boardmani n. sp.
Pleuroploca altimasta n. sp.
Cirsotrema kelea n. sp.

EXPLANATION OF PLATE IX

Figs. 1, 2.—*Melaxinæa labyrintha* Iredale.
Figs. 3, 4.—*Melaxinæa labyrintha* Iredale. Juvenile.
Fig. 5.—*Coralastele allanæ* Iredale.
Fig. 6.—*Phenacovolva nectarea* Iredale.
Fig. 7.—*Colus boardmani* Iredale.
Fig. 8. *Cancellaphera amasia* Iredale.
Fig. 9.—*Pleuroploca altimasta* Iredale.
Figs. 10, 11.—*Prophetilora arizela* Iredale.
Figs. 12, 13.—*Nivigena melwardi* Iredale.
Figs. 14, 15.—*Fallartemis amina* Iredale.
Fig. 16.—*Cirsotrema kelea* Iredale.
Fig. 17.—*Pseudovertagus excelsior* Iredale.
Fig. 18.—*Semelartemis œtha* Iredale.

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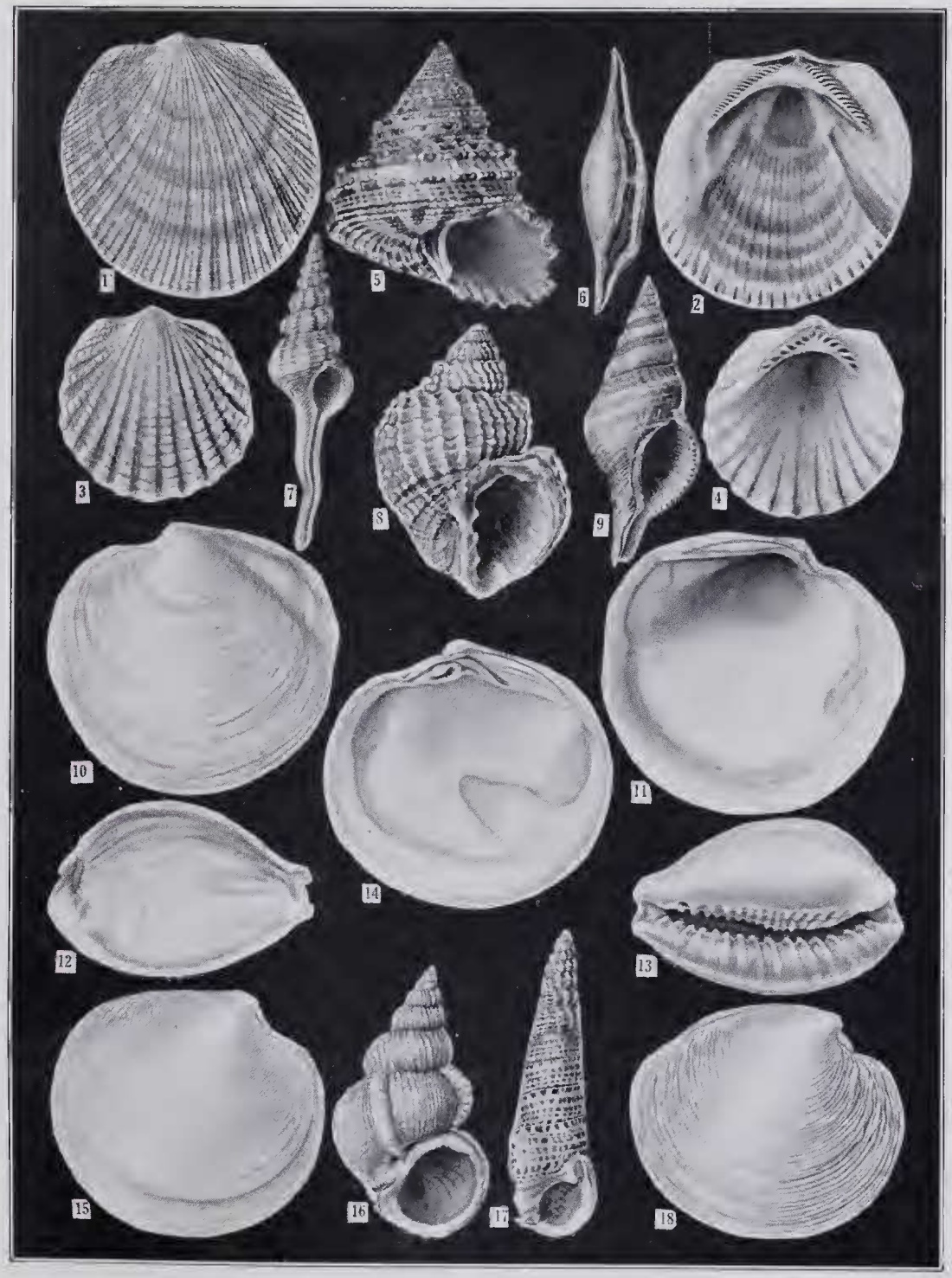

Queensland Mollusca.—Iredale.

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